Application No.: 10/667,368

Attorney Docket No.: Q75436

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the

application:

LISTING OF CLAIMS:

1. (previously presented): A light-emitting element which emits light itself, comprising:

a light-emitting portion having a higher refractive index than a refractive index of air; and

a diffraction grating structure provided to a light-emitting outermost surface side of the

light-emitting portion,

wherein a minimum light-emission value is equal to or less than 50% of a maximum

light-emission value when white light is emitted from said light-emitting portion,

wherein said diffraction grating structure has a pitch of a fine convex-concave structure

being in a range of from 1 µm to 4 µm, and a depth of said fine convex-concave structure being

in a range of from 0.4 µm to 4 µm.

2. (original): The light-emitting element according to claim 1, further comprising:

a color-separation filter provided between said light-emitting portion and said light-

emitting side surface,

wherein a minimum value of a spectral product obtained from a light-emission waveform

of the white light emitted from said light-emitting portion and a spectral transmittance of said

color-separation filter is equal to or less than 50% of a maximum value thereof, whereby the

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minimum light-emission value is equal to or less than 50% of the maximum light-emission value

when the white light is emitted from said light-emitting portion.

3. (original): The light-emitting element according to claim 2, wherein a color-

separation filter which has minimum transmittance of equal to or less than 50% of maximum

transmittance is used for said color-separation filter.

4. (currently amended): The light-emitting element according to claim 1, wherein said

light-emitting portion includes light-emitting materials for at least two primary colors capable of

emitting the white light among light-emitting materials for three primary colors.

5. (original): The light-emitting element according to claim 4, wherein a light-emission

ratio of the light-emitting materials for said at least two primary colors among the light-emitting

materials for the three primary colors is adjusted to make the minimum light-emission value

equal to or less than 50% of the maximum light-emission value when the white light is emitted

form said light-emitting portion.

6. (original): The light-emitting element according to claim 4, wherein said light-

emitting portion includes the light-emitting materials for said three primary colors.

7. (original): The light-emitting element according to claim 4, wherein said light-

emitting materials exhibit light emission by singlet exciton.

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8. (original): The light-emitting element according to claim 2, wherein said light-

emitting materials exhibit light emission by triplet exciton.

9. (canceled).

10. (previously presented): The light-emitting element according to claim 1, wherein a

ratio of said depth to said pitch in said fine convex-concave structure ranges from 0.25 to 0.60.

11. (previously presented): The light-emitting element according to claim 1, wherein

said light-emitting portion includes light-emitting materials for at least two primary colors

emitting the white light among light-emitting materials for three primary colors.

12. (previously presented): The light-emitting element according to claim 1, further

comprising:

a color-separation filter provided between said light-emitting portion and said light-

emitting side surface,

wherein a minimum value of a spectral product obtained from a light-emission waveform

of the white light emitted from said light-emitting portion and a spectral transmittance of said

color-separation filter is approximately 7% of a maximum value thereof.

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13. (previously presented): The light-emitting element according to claim 4, wherein the

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combination of said light-emitting portion and said color separation filter suppresses the

transmitted light to extent in the wave range ±25nm or more apart from the maximum light

emission wavelength of said light-emitting materials.

14. (previously presented): The light-emitting element according to claim 1, further

comprising: a color-separation filter provided between said light-emitting portion and said light-

emitting side surface,

wherein a minimum value of a spectral product obtained from a light-emission waveform

of the white light emitted from said light-emitting portion and a spectral transmittance of said

color-separation filter is approximately 2% of a maximum value thereof.

15. (previously presented): The light-emitting element according to claim 1, wherein

said light-emitting portion comprises:

a glass substrate,

a transparent electrode formed on one side of said glass substrate,

a light-emitting layer formed on said transparent electrode, and

a rear electrode formed on said light-emitting layer,

wherein said diffraction grating structure is formed on the other side of said glass

substrate that is said light-emitting outermost surface side of said light-emitting portion.

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16. (previously presented): The light-emitting element according to claim 15, further

comprising a color-separation filter formed between said glass substrate and said diffraction

grating structure.

17. (previously presented): The light-emitting element according to claim 15, wherein

said diffraction grating structure is obtained by providing the fine convex-concave structure to

the surface of said other side of said glass substrate.

18. (previously presented): The light-emitting element according to claim 15, wherein

said diffraction grating structure is formed by bonding an optical film separately manufactured as

a transmission type optical film that has the fine convex-concave structure to said other surface

of said glass substrate.

19. (previously presented): The light-emitting element according to claim 2, wherein

said diffraction grating structure is obtained by providing the fine convex-concave structure to

the outer surface of said color-separation filter.

20. (previously presented): The light-emitting element according to claim 2, wherein

said diffraction grating structure is formed by bonding an optical film separately manufactured as

a transmission type optical film that has the fine convex-concave structure to the outer surface of

said color-separation filter.

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21. (previously presented): The light-emitting element according to claim 2, wherein said color-separation filter is formed to have a single layer structure.

- 22. (previously presented): The light-emitting element according to claim 2, wherein said color separation filter is formed to have a multi-layer structure.
- 23. (previously presented): The light-emitting element according to claim 15, wherein the light emitted is substantially white light.